AMENDMENTS TO THE CLAIMS:

1.   (Original)   A method for representing in an image format a signature stored in a digitized signature record format wherein the signature is represented in a sequence of strokes each having a starting point and an end mark, and wherein locations of points of each stroke are coded as differences in location from either the starting point or an immediately previous point of the stroke, the method comprising:

(a) reading a point location from the digitized signature record;

(b) determining whether the read point location is the starting point of a stroke;

(c) if the read point location is the starting point of a stroke, then:

setting a pixel in the image format located at the location of the read point to a display value,

storing the pixel location and display value in the image format, and

returning to step (a) for reading the next point location until an end mark is reached;

(d) if the read point location is not the starting point of a stroke, then:

setting a line of pixels in the image format located in locations from the read point location of the previous read point to the read point location of the present read point to a display value,

storing the pixel locations and display values of the line of pixels in the image format, and

returning to step (a) for reading the next point location until an end mark is reached;

(e) repeating steps (a) through (d) for all of the strokes of the signature.

2.   (Original)   The method of claim 1 wherein the image format is a bitmap format, a BMP format, a TIFF format or a JPEG format.

3.   (Original)   The method of claim 1 wherein:

        step (c) further comprises displaying the pixel location and display value in the image format; and

        step (d) further comprises displaying the pixel locations and display values of the line of pixels in the image format.

4.   (Currently Amended)   A <u>computer-readable</u> storage medium encoded with machine-readable computer instructions for generating a digitized signature record from a signature signed on a signing surface indicating the location of a stylus on the signing surface comprising:

        (a) means for causing a computer to record the location of the stylus when placed on the signing surface for defining a starting point of each stroke of the signature, wherein the starting point of a first stroke of the signature defines the starting point of the signature;

        (b) means for causing the computer to record point locations of the stylus on the signing surface relative to a previous point until the stylus is lifted off the signing surface, thereby defining a stroke of the signature between the starting point and the lift off point;

        (c) means for causing the computer to repeat elements (a) through (b) for each subsequent stroke of the signature until the signature is completely signed; and

        (d) means for causing the computer to record directly or indirectly a time at which each recorded point is recorded relative to the time of the starting point of the signature;

        (e) means for causing the computer to store the locations of the starting points and subsequent points of each stroke of the signature, and the recorded time, in the digitized signature record,

        whereby the computer is caused to generate a digitized signature record that includes at least the positions of the starting points and subsequent points of each stroke of a signature in coordinates relative to a coordinate of a previous point thereof

and the time point thereof.

5.   (Original)   The storage medium of claim 4 wherein said means for causing the
computer to record recited in steps (a) and (b) each comprises means for causing the
computer to record the x and y coordinates of the position of the stylus on the signing
surface.

6.   (Original)   The storage medium of claim 4 wherein said means for causing the
computer to record directly or indirectly a time comprises either:

means for causing the computer to provide a source of timing data and to
record the timing data corresponding to the time at which each recorded point is
recorded; or

means for causing the computer to record a sampling time or rate at which the
point locations of the stylus on the signing surface are recorded.

7.   (Original)   The storage medium of claim 4 further comprising:

means for causing the computer to generate a relational check code from the
locations of the starting points and subsequent points of each stroke of the signature in
the digitized signature record; and

means for causing the computer to store the relational check code in the
digitized signature record.

8.   (Original)   The storage medium of claim 4 further comprising:

means for causing the computer to associate date and time data with the
digitized signature record;

means for causing the computer to generate a relational check code from the
date and time data and from the locations of the starting points and subsequent points
of each stroke of the signature in the digitized signature record; and

means for causing the computer to store the relational check code in the

digitized signature record.

9.   (Original)   The storage medium of claim 8 wherein said means for causing the computer to associate date and time data includes:

  means for causing the computer to communicate the digitized signature record via a server; and

  means for causing the computer to associate date and time data from the server with the digitized signature record.

10.   (Original)   The storage medium of claim 4 further comprising:

  means for causing the computer to communicate the digitized signature record via a server; and

  means for causing the computer to associate date and time data from the server with the digitized signature record.

11.   (Original)   The storage medium of claim 4 wherein said means for causing the computer to store further comprises:

  means for causing the computer to determine a maximum number of bits for coding the differences in location of any point location of the stylus relative to the immediately previous point location thereof; and

  means for causing the computer to store an indication of the determined maximum number of bits in the digitized signature record,

  wherein the location of the starting point of each stroke is coded in no more than two bytes and the point locations of each stroke are each coded in no more than one byte.

12.   (Original)   The storage medium of claim 4 wherein the signing surface provides an indication of the pressure of the stylus on the signing surface,

  said means for causing the computer to record set forth in steps (a) and (b)

further comprising means for causing the computer to record the pressure of the stylus on the signing surface; and

     said storage medium further comprising means for causing the computer to store in the digitized signature record the pressure of the stylus on the signing surface.

13.   (Original) The storage medium of claim 4 further comprising means for causing the computer to compare the digitized signature record with a reference digitized signature record for authenticating the signature, and/or verifying the signature, and/or identifying the signer of the signature.

14.   (Original) A method for generating a digitized writing record from a writing written on a writing surface providing an indication of the location of a stylus on the writing surface comprising:

     (a) recording the location of the stylus when placed on the writing surface for defining a starting point of each stroke of the writing, wherein the starting point of a first stroke of the writing defines the starting point of the writing;

     (b) recording point locations of the stylus on the writing surface until the stylus is lifted off the writing surface, thereby defining a stroke of the writing between the starting point and a lift off point;

     (c) repeating steps (a) and (b) for each subsequent stroke of the writing until the writing is completely written;

     (d) determining a number of bits for storing the point locations of the strokes of the writing and storing the determined number in the digitized writing record;

     (e) storing in the digitized writing record a time or rate at which the recorded points are recorded;

     (f) storing in the digitized writing record the locations of the starting points of each stroke of the writing; and

     (g) coding in the determined number of bits the locations of the points of each

stroke of the writing in values relative to a starting point or an immediately previous point thereof and storing same in the digitized writing record;

whereby the digitized writing record includes at least the positions of points of a writing in coordinates relative to a starting point or an immediately previous point thereof and the timing thereof.

15.   (Original)   The method of claim 14 wherein said recording recited in steps (a) and (b) each comprises recording the x and y coordinates of the position of the stylus on the writing surface.

16.   (Original)   The method of claim 14 further comprising:

generating a relational check code from the locations of the starting points and points of each stroke of the writing stored in the digitized writing record; and

associating the relational check code with the digitized writing record.

17.   (Original)   The method of claim 14 further comprising:

associating date and time data with the digitized writing record;

generating a relational check code from the date and time data and from the locations of the starting points and points of each stroke of the writing stored in the digitized writing record,

associating the relational check code with the digitized writing record.

18.   (Original)   The method of claim 17 wherein said associating date and time data includes:

communicating the digitized writing record via a server; and

associating date and time data from the server with the digitized writing record.

19.   (Original)   The method of claim 14 further comprising:

communicating the digitized writing record via a server; and

associating date and time data from the server with the digitized writing

record.

20.   (Original)   The method of claim 14 wherein step (d) comprises determining the

minimum number of bits necessary for storing the point locations of the strokes of the

writing and storing the determined minimum number in the digitized writing record.

21.   (Original)   The method of claim 14 wherein step (d) comprises:

determining a number of bits for storing the x and y coordinates of point

locations of the strokes of the writing; and

storing in one byte of the digitized writing record the determined number for

storing the x coordinates and the determined number for storing the y coordinates.

22.   (Original)   The method of claim 14 wherein steps (f) and (g) comprise:

storing in respective first and second bytes of the digitized writing record

representative of a stroke of the writing the x and y coordinates of the starting point of

the stroke;

coding in the number of bits determined in step (d) the differences of the x and

y coordinates of the points of the stroke of the writing relative to a starting point or to

an immediately previous point, and storing same in the digitized writing record;

storing in the digitized writing record an end mark value representative of the

end of a stroke; and

repeating each of the foregoing three steps for each stroke of the writing.

23.   (Original)   The method of claim 14 further comprising representing the writing stored

in the digitized writing record in an image format, wherein said representing

comprises:

(a)   reading a point location from the digitized writing record;

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(b) determining whether the read point location is the starting point of a stroke;

(c) if the read point location is the starting point of a stroke, then:

setting a pixel in the image format located at the location of the read point to a display value,

storing the pixel location and display value in the image format, and

returning to step (a) hereof for reading the next point location;

(d) if the read point location is not the starting point of a stroke, then:

setting a line of pixels in the image format located in locations from the read point location of the previous read point to the read point location of the present read point to a display value,

storing the pixel locations and display values of the line of pixels in the image format, and

returning to step (a) hereof for reading the next point location;

(e) repeating steps (a) through (d) for all of the strokes of the writing.

24.   (Original)   The method of claim 14 wherein the writing surface provides an indication of the pressure of the stylus on the writing surface,

said recording set forth in steps (a) and (b) further comprising recording the pressure of the stylus on the writing surface; and

said method further comprising storing in the digitized writing record the pressure of the stylus on the writing surface.

25.   (Original)   The method of claim 14 further comprising comparing the digitized writing record with a reference digitized writing record for authenticating the writing, and/or verifying the writing, and/or identifying the writer of the writing.

26.   (Original)   A method for representing in an image format a writing stored in a

digitized writing record format wherein the writing is represented in a sequence of strokes each having a starting point and an end mark, and wherein locations of points of each stroke are coded as differences in location from either the starting point or an immediately previous point of the stroke, the method comprising:

(a) reading a point location from the digitized writing record;

(b) determining whether the read point location is the starting point of a stroke;

(c) if the read point location is the starting point of a stroke, then:

setting a pixel in the image format located at the location of the read point to a display value,

storing the pixel location and display value in the image format, and

returning to step (a) for reading the next point location until an end mark is reached;

(d) if the read point location is not the starting point of a stroke, then:

setting a line of pixels in the image format located in locations from the read point location of the previous read point to the read point location of the present read point to a display value,

storing the pixel locations and display values of the line of pixels in the image format, and

returning to step (a) for reading the next point location until an end mark is reached;

(e) repeating steps (a) through (d) for all of the strokes of the writing.

27.   (Original)   The method of claim 26 wherein the image format is a bitmap format, a BMP format, a TIFF format or a JPEG format.

28.   (Original)   A method for storing and displaying a digitized writing record from a writing written on a writing surface providing an indication of the location of a stylus

on the writing surface, said method comprising:

(a) recording the location of the stylus when placed on the writing surface for defining a starting point of each stroke of the writing, wherein the starting point of a first stroke of the writing defines the starting point of the writing;

(b) recording point locations of the stylus on the writing surface until the stylus is lifted off the writing surface, thereby defining a stroke of the writing between the starting point and a lift off point;

(c) repeating steps (a) and (b) for each subsequent stroke of the writing until the writing is completely written;

(d) determining a number of bits for storing the point locations of the strokes of the writing and storing the determined number in the digitized writing record;

(e) storing in the digitized writing record a time or rate at which the recorded points are recorded;

(f) storing in the digitized writing record the locations of the starting points of each stroke of the writing; and

(g) coding in the determined number of bits the locations of the points of each stroke of the writing in values relative to a starting point or an immediately previous point thereof and storing same in the digitized writing record;

whereby the stored digitized writing record includes the positions of points of the writing in coordinates relative to the starting point or an immediately previous point thereof and the timing thereof;

said method further comprising representing the stored digitized writing in a displayed image, wherein said representing comprises:

(h) reading a point location from the digitized writing record;

(i) determining whether the read point location is the starting point of a stroke;

(j) if the read point location is the starting point of a stroke, then:

setting a pixel in the image located at the location of the read point to a display value,

displaying the pixel location and display value in the displayed image; and

returning to step (h) hereof for reading the next point location;

(k) if the read point location is not the starting point of a stroke, then:

setting a line of pixels in the image located in locations from the read point location of the previous read point to the read point location of the present read point to a display value,

displaying the pixel locations and display values of the line of pixels in the displayed image; and

returning to step (h) hereof for reading the next point location;

(l) repeating steps (h) through (k) for all of the strokes of the digitized writing record;

whereby the writing stored in the digitized writing record is displayed.

29. (Original) The method of claim 28 wherein step (d) comprises determining the minimum number of bits necessary for storing the point locations of the strokes of the writing and storing the determined minimum number in the digitized writing record.

30. (Original) The method of claim 28 wherein step (d) comprises:

determining a number of bits for storing the x and y coordinates of point locations of the strokes of the writing; and

storing in one byte of the digitized writing record the determined number for storing the x coordinates and the determined number for storing the y coordinates.

31. (Original) The method of claim 28 wherein steps (f) and (g) comprise:

storing in respective first and second bytes of the digitized writing record representative of a stroke the x and y coordinates of the starting point of the stroke;

coding in the number of bits determined in step (d) the differences of the x and y coordinates of the points of the stroke of the writing relative to a starting point or to

an immediately previous point, and storing same in the digitized writing record;

storing in the digitized writing record an end mark value representative of the end of a stroke; and

repeating each of the foregoing three steps for each stroke of the writing.

32.   (Original)   A method for generating a digitized writing record from a writing signed on a writing surface comprising:

(a) recording the location of a starting point of each stroke of the writing, wherein the starting point of a first stroke defines the starting point of the writing;

(b) recording point locations on the writing surface until the stylus is lifted off the writing surface, thereby defining a stroke of the writing;

(c) repeating steps (a) and (b) for each subsequent stroke of the writing until the writing is completely written;

(d) determining a number of bits for storing the point locations of the writing and storing the determined number in the digitized writing record;

(e) storing in the digitized writing record a time or rate at which the recorded points are recorded;

(f) storing in the digitized writing record the locations of the starting points of each stroke; and

(g) coding in the determined number of bits the locations of the points of each stroke in values relative to a starting point or an immediately previous point thereof and storing same in the digitized writing record.

33.   (Original)   The method of claim 32 wherein:

said determining of step (d) includes determining the minimum number of bits needed for storing the point locations of the writing and storing the determined number in one byte of the writing record; and

said coding and storing of step (g) includes storing the determined number of

bits of the coded point locations in given bytes of the digitized writing record ignoring the defined boundaries of the given bytes.

34.   (Original)   A method for storing a digitized writing record from a writing written on a writing surface providing an indication of the location of a stylus on the writing surface, said method comprising:

(a) recording the location of the stylus when placed on the writing surface for defining a starting point of each stroke of the writing, wherein the starting point of a first stroke of the writing defines the starting point of the writing;

(b) recording point locations of the stylus on the writing surface until the stylus is lifted off the writing surface, thereby defining a stroke of the writing between the starting point and the lift off point;

(c) repeating steps (a) and (b) for each subsequent stroke of the writing until the writing is completely written;

(d) determining a number of bits needed for storing the x and y coordinates of point locations of the strokes of the writing; and

(e) storing in one byte of the digitized writing record the numbers determined in step (d) for storing the x coordinates and the y coordinates;

(f) storing in the digitized writing record a time or rate at which the recorded points are recorded;

(g) storing in respective first and second bytes of the digitized writing record representative of a stroke of the writing the x and y coordinates of the starting point of the stroke;

(h) coding in the number of bits determined in step (d) the differences of the x and y coordinates of the points of the stroke of the writing relative to a starting point or to an immediately previous point, and storing same in the digitized writing record;

(i) storing in the digitized writing record an end mark value representative of the end of a stroke; and

(j) repeating each of the foregoing steps (g) through (i) for each stroke of the digitized writing;

whereby the stored digitized writing record includes the positions of points of the writing in coordinates relative to the starting point or an immediately previous point thereof and the timing thereof.